

TECHNICAL MEMORANDUM

To: Alexandria Rees, Project Manager I, Halton Region **RVA:** 236814

From: Gord Scobie, P.Eng. – R.V. Anderson Associates Limited

Date: January 16, 2025

Subject: Halton Hills #4 Wastewater Pumping Station Municipal Class Environmental Assessment Study
Transportation Assessment

1.0 Introduction

This memorandum has been prepared in support of the subject Halton Hills #4 Wastewater Pumping Station Municipal Class Environmental Assessment (MCEA) Study, as requested by the Region of Halton (the Region). Through public consultation, a concern has been raised regarding a proposed driveway connection that will service the new Halton Hills #4 Wastewater Pumping Station (WWPS), and its location relative to a traffic signal-controlled intersection and other existing driveways along Steeles Avenue.

The objective of this memorandum will be to review the need and appropriateness of the proposed driveway connection to the new Halton Hills #4 WWPS to Steeles Avenue.

2.0 Study Area

Based on the information provided, the proposed driveway for the new Halton Hills #4 WWPS will be located approximately 220 m west of the signalized Steeles / Winston Churchill intersection and will ultimately operate as a right-in/right-out connection. The intended purpose of this driveway connection will be to provide periodic access to/from the subject pumping station, for service vehicles only.

Steeles Avenue is a four-lane (i.e., two travel lanes per direction) arterial roadway, with a posted speed limit of 80 km/h along the frontage of the subject site. Asphalt sidewalks are provided along both sides of the roadway; however, due to a lack of maintenance, sidewalks vary in width within the vicinity of the site (i.e., some sections of sidewalk are very narrow).

The following **Figure 1** depicts the proposed preliminary Site Plan and its local context, and attached is a more detailed Site Plan.



Figure 1: Preliminary Site Plan and Local Context – Source Image: Google Maps

The Steeles / Winston Churchill intersection is a four-legged signalized intersection. The eastbound and southbound approaches consist of a single auxiliary left-turn lane, a single channelized right-turn lane, and two through lanes. The northbound and westbound approaches consist of dual auxiliary left-turn lanes, a single channelized right-turn lane, and two through lanes.

It should be noted that the combined storage and taper lengths of the eastbound auxiliary turn lanes extend approximately 230 and 260 m west of the Steeles / Winston Churchill intersection (i.e., extend beyond the location of the subject proposed driveway connection to Steeles Avenue), respectively.

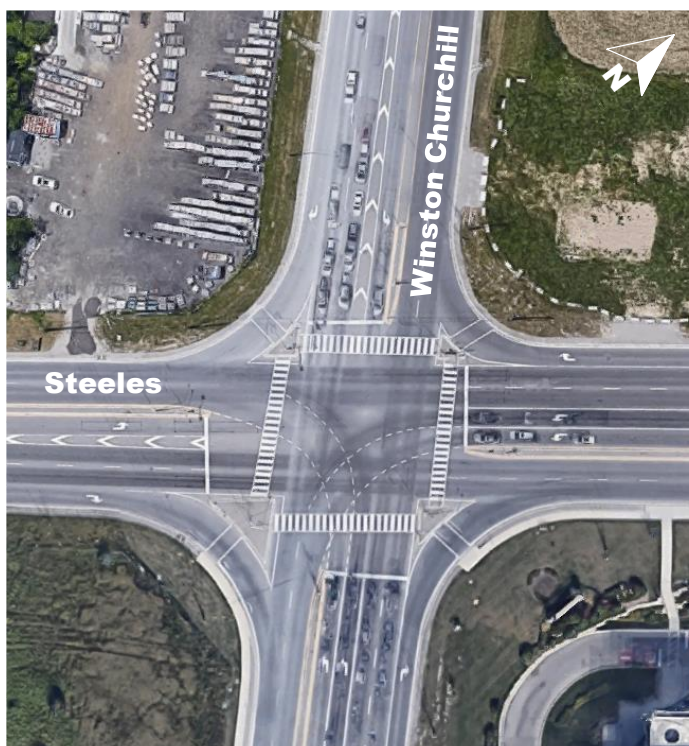


Figure 2: Steeles / Winston Churchill Intersection
Source Image: Google Maps

3.0 Planned Network Improvements

With respect to the planned widening of Steeles Avenue from 4 to 6 lanes, from Trafalgar Road to Winston Churchill Boulevard, construction is planned to begin in 2028. It should be noted that a multi-use path (MUP) is also planned along this roadway, as part of the road widening. With this widening and new cycling infrastructure, minor connections (e.g., driveways) will need to be restricted to right-in/right-out only by a raised centre median, limiting the potential for the more severe angle type collisions that involve left-turning vehicles.

The planned widening on Steeles Avenue will ultimately restrict the proposed Halton Hills #4 Pumping station driveway connection to right-in/right-out movements only.

4.0 Projected Site-Generated Traffic

Based on information provided by the Region, the new Halton Hills #4 WWPS will typically have a single operator visit the site once per week for approximately two hours, during normal weekday business hours. This trip is also expected to occur during mid-day, and not contribute or interfere with peak hour traffic operations along Steeles Avenue.

Additionally, the Region will schedule project management staff for two 8-hr days, once a year to complete maintenance checks, and separately, maintenance staff will be required to conduct a wet well clean out once per year, which normally takes less than a typical workday. This may generate two to three vehicles accessing/egressing the subject site during peak hour traffic operations along Steeles Avenue.

Otherwise, the new Halton Hills #4 WWPS will be controlled remotely and there is no need to visit the site on a daily basis, unless an alarm is triggered or there is a breakdown that requires attention, both of which, are events that are typically infrequent, and would only potentially generate one to three vehicles accessing/egressing the site.

Based on the foregoing, the Halton Hills #4 WWPS is projected to generate a negligible amount of site-generated traffic.

5.0 Site Plan Review

With respect to the planned widening of Steeles Avenue, the proposed Halton Hills #4 Pumping station driveway will ultimately operate as a right-in/right-out connection, and with respect to the Region's Access Management Guidelines, the guideline states in Section 3.2 – Access Spacing:

The general spacing guidelines for right in/out access is 115 m to 140 m between accesses. Where spacing is not conducive to the land use, physical or economical reasons, a spacing of 30 m to 60 m may be considered.

Given the proposed Halton Hills #4 WWPS driveway is located approximately 30 m west of the nearest adjacent driveway connection and approximately 220 m west of the adjacent Steeles / Winston Churchill intersection, and given the negligible projected site-generated traffic volumes and site constraints, the proposed location of the subject driveway connection will satisfy the Region's Access Management Guidelines.

In addition to the Region's Access Management Guidelines, the Transportation Association of Canada (TAC) Geometric Guidelines (i.e., a national and well-respected industry standard), the minimum recommended spacing of a driveway from a signalized intersection along an arterial roadway is to be greater than the left-turn storage length (i.e., not including a turn lane's taper length) at the adjacent signalized intersection. Given the eastbound left-turn storage at the Steeles / Winston Churchill intersection is currently 95 m, the proposed location of the new Halton Hills #4 WWPS driveway is considered acceptable, located approximately 220 m west of the Steeles / Winston Churchill intersection.

With the current lack of median along Steeles Avenue, vehicles turning left out of or into the new Halton Hills #4 Pumping station driveway can be mitigated with signage, which should be respected, as all site-generated traffic to/from the new Halton Hills #4 WWPS will be municipal staff. Further restricting this movement, the Region's Access Management Guidelines suggests the installation of flexible delineators (i.e., flex-posts) as a temporary measure, when a Roads Capital project is imminent. Given the planned widening of Steeles Avenue is not scheduled to begin until 2028, measures such as flex-posts may not be suitable during winter months, as they can easily become damaged / removed by snow clearing equipment. As such, to further restrict vehicles turning left out of or into the new Halton Hills #4 Pumping station driveway, a "pork-chop" splitter island will be installed at the entry / exit point of the driveway, to channelize right-in / right-out movements.

6.0 Conclusions and Recommendations

Based on the foregoing transportation assessment, the following findings and recommendations are offered:

- › The new Halton Hills #4 WWPS driveway is proposed to be located approximately 220 m west of the signalized Steeles / Winston Churchill intersection, and will ultimately operate as a right-in/right-out connection.

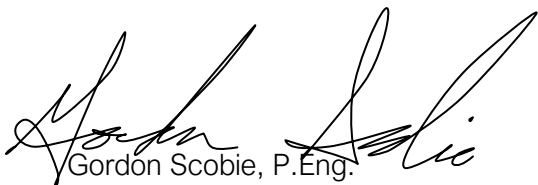
- › The new Halton Hills #4 WWPS is projected to generate a negligible amount of site-generated traffic.
- › Operating as a right-in/right-out connection, the new Halton Hills #4 WWPS driveway will satisfy the Region's Access Management and TAC Guidelines.
- › With the current lack of median along Steeles Avenue, vehicles turning left out of or into the new Halton Hills #4 WWPS driveway can be mitigated with signage, and with the implementation of a "pork-chop" splitter island, installed at the entry / exit point of the driveway.

Based on our review of the proposed Halton Hills #4 WWPS driveway connection, it should be noted that there are a number of existing full-movement driveway connections that are located within the same, or closer proximity to the Steeles / Winston Churchill intersection. A review of these driveway connections should also be conducted, if there are existing safety concerns in the area of the proposed Halton Hills #4 WWPS.

If there are any questions on the foregoing, please contact the undersigned.

Yours very truly,

R.V. ANDERSON ASSOCIATES LIMITED



Gordon Scobie, P.Eng.

Associate, Project Manager, Team Lead
Traffic and Transportation Planning

Attachments



Site Plan Concept
Halton Region
Premier Gateway Employment Area
Halton Hills Wastewater Pumping
Station #4
Issued for Project File Report



Google